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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,770	04/27/2001	Tadayuki Suzuki	0425-0835P	2822

2292 7590 05/21/2003

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EXAMINER	
CLARDY, S	

ART UNIT	PAPER NUMBER
1616	12

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/842,770	Suzuki et al
Examiner	**Art Unit**
S. Mark Clardy	1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Mar 6, 2003* .

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *8-37* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *8-37* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). *9, 11*
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Claims 8-22 and new claims 23-37 are now pending in this application.

Applicants' claims are drawn to a plant activating agent[1] (claims 8-13, 23-28), and method of applying the agent(s) to plants to assist the plant growth (claims 14-22, 29-37). Improved plant growth is determined by a 5% "improved reproduction of unicellular green cells"[2] (claim 8; the term is redundant), or any of five other criteria (claim 9): a "2 points" improved degree of chlorophyll value, a 10% increase in plant weight, a 5% improved degree of leaf area, a 5% increase in [leaf] blade ascorbic acid concentration, or a 10% decrease in [leaf] blade nitrate ion concentration. All of the methods of determining improved plant growth appear to be art accepted, conventional measures for assessing plant growth improvement; each method described in the specification makes use of readily available instruments used in conventional laboratory analysis of plant materials.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8-37 are again rejected under 35 U.S.C. 103(a) as being unpatentable over any one of the following: Yamashita (US 5,549,729), Sampson (US 4,436,547), or Sakagami et al (US 6,004,906).

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[1]Claim 1: fatty acids, organic acids, lipids, alcohols, amines, amino acids, proteins, nucleic acids, natural extracts, fermentation residues, vitamins

[2]$100(P_1-P_0)/P_0$, in which P represents the reproduction amount of green cells.

Yamashita teaches the utility of a wide variety of compounds, including those recited in claim 8, as being useful in plant growth stimulating compositions; see columns 7-9 and the table in column 3: vitamins and cofactors (several listed), seaweed extract, yeast extract, citric acid, various other acids, sugar alcohols, nucleotides and bases.

Sampson teaches the utility of various additives for use with plant growth regulators for improving the growth characteristics of cereal crops. Among the additives are organic acids, vitamins or cofactors, purine or pyrimidine nucleosides or nucleotides, fatty acids, naturally occurring fats and oils, and amino acids (col 2, lines 1-39).

Sakagami et al teach plant growth factors comprising peptides which are useful for promoting cell growth in plants (columns 1-2).

Thus it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have used any of the disclosed materials in Yamashita, Sampson, or Sakagami et al in compositions for enhancing plant growth. Again, determination of appropriate concentration ranges to achieve any given growth criteria would be within the skill level of the ordinary artisan. Further, it appears that applicants' threshold values are simply arbitrarily selected cut off points for plant growth, chlorophyll content, nitrate ion concentration, etc. It is well-established that merely selecting proportions and ranges is not patentable absent a showing of criticality. In re Becket, 33 U.S.P.Q. 33 (C.C.P.A. 1937). In re Russell, 439 F.2d 1228, 169 U.S.P.Q. 426 (C.C.P.A. 1971). It is immaterial whether any of the references disclose application to algae or other "unicellular green cells"; the materials claimed herein are the same as those recited

in the prior art. Further, it is noted that the green plant cells herein are merely used in conventional assay processes for screening appropriate materials, and do not appear to be the final targets for the claimed methods.

No unobvious or unexpected results are noted; no claim is allowed.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103c and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is (703) 308-4550.

S. Mark Clardy
Primary Examiner
AU 1616

May 19, 2003